THAT WHICH IS CLAIMED IS:

1. A method of enabling uniform control of bromine concentrations in a recreational body of water which has not been treated with an N,N'-dihalo-5,5-dialkylhydantoin biocidal agent or which does not contain residues resulting from prior addition thereto of an N,N'-dihalo-5,5-dialkylhydantoin biocidal agent, which method comprises conducting the following steps:

A) introducing into said body of water at least one water-soluble source of bromide ion and at least one dialkylhydantoin, in which the alkyl groups each contain independently in the range of 1 to about 4 carbon atoms; and then

B) introducing into said body of water at least one N,N'-dihalo-5,5-dialkylhydantoin in which one halogen atom is a bromine atom and the other halogen atom is either a bromine atom or a chlorine atom, and in which one alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms.

2. A method according to claim 1 wherein said body of water is a swimming pool.

3. A method according to claim 1 wherein said source of bromide ion is (i) at least one alkali metal bromide or (ii) at least one alkaline earth metal bromide, or (iii) both of (i) and (ii).

4. A method according to claim 1 wherein said source of bromide ion is sodium bromide.

5. A method according to claim 1 wherein step A) results in a bromide ion concentration in said body of water of about 5 ppmw to about 50 ppmw.

6. A method according to claim 1 wherein said dialkylhydantoin is dimethylhydantoin.

7. A method according to claim 1 wherein said at least one dialkylhydantoin is introduced into said body of water in an amount in the range of about 15 ppmw to about 20 ppmw.

8. A method according to claim 1 wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is at least one 1,3-dibromo-5,5-dialkylhydantoin in which one alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms.

9. A method according to claim 1 wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is 1,3-dibromo-5,5-dimethylhydantoin.

10. A method according to claim 1 wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is (i) N,N'-bromochloro-5,5-dimethylhydantoin or (ii) a mixture of N,N'-bromochloro-5,5-dimethylhydantoin, 1,3-dichloro-5-ethyl-5-methylhydantoin, and 1,3-dichloro-5,5-dimethylhydantoin in which more than 50 wt% of said mixture is N,N'-bromochloro-5,5-dimethylhydantoin.

11. A method according to claim 1 wherein step B) results in an active bromine concentration in the range of about 1 ppmw to about 10 ppmw as active Br_2.

12. A method according to claim 1 wherein said body of water is a swimming pool equipped with an oxidation-reduction potential controller having an ORP sensor probe in contact with the water in the pool, wherein said source of bromide ion is sodium bromide, wherein said dialkylhydantoin is dimethylhydantoin, and wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is at least one 1,3-dibromo-5,5-dialkylhydantoin in which one

alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms.

13. A method according to claim 12 wherein step A) results in a bromide ion concentration in said body of water of about 5 ppmw to about 50 ppmw, wherein said at least one dialkylhydantoin is introduced into said body of water in an amount in the range of about 15 ppmw to about 20 ppmw, and wherein step B) results in an active bromine concentration in the range of about 1 ppmw to about 10 ppmw as active Br_2.

14. A method according to claim 13 wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is 1,3-dibromo-5,5-dimethylhydantoin.

15. A method according to claim 13 wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is (i) N,N'-bromochloro-5,5-dimethylhydantoin or (ii) a mixture of N,N'-bromochloro-5,5-dimethylhydantoin, 1,3-dichloro-5-ethyl-5-methylhydantoin, and 1,3-dichloro-5,5-dimethylhydantoin in which more than 50 wt% of said mixture is N,N'-bromochloro-5,5-dimethylhydantoin.

16. A method according to claim 1 wherein said body of water is equipped with an oxidation-reduction potential controller having and oxidation-reduction potential sensor probe in contact with said body of water.

17. A method according to claim 16 wherein said body of water is a swimming pool.

18. A method of reducing the interval of time of stabilizing the oxidation-reduction potential of a recreational body of water which has not been treated with an N,N'-dihalo-5,5-dialkylhydantoin biocidal agent or which does not contain residues resulting from prior

addition thereto of an N,N'-dihalo-5,5-dialkylhydantoin biocidal agent, which method comprises conducting the following steps:

A) introducing into said body of water at least one water-soluble source of bromide ion and at least one dialkylhydantoin, in which the alkyl groups each contain independently in the range of 1 to about 4 carbon atoms; then

B) introducing into said body of water at least one N,N'-dihalo-5,5-dialkylhydantoin in which one halogen atom is a bromine atom and the other halogen atom is either a bromine atom or a chlorine atom, and in which one alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms; and

C) determining when the oxidation-reduction potential of said body of water has become stabilized.

19. A method according to claim 18 wherein said interval of time is in the range of about 1 to about 10 hours.

20. A method according to claim 18 wherein said interval of time is in the range of about 1 to about 6 hours.

21. A method according to claim 18 wherein said body of water is a swimming pool equipped with an oxidation-reduction potential controller having an ORP sensor probe in contact with the water in the pool, wherein said source of bromide ion is sodium bromide, wherein said dialkylhydantoin is dimethylhydantoin, and wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is at least one 1,3-dibromo-5,5-dialkylhydantoin in which one alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms.

22. A method according to claim 21 wherein step A) results in a bromide ion concentration in said body of water of about 5 ppmw to about 50 ppmw, wherein said at least one dialkylhydantoin is introduced into said body of water in an amount in the range of about

15 ppmw to about 20 ppmw, and wherein step B) results in an active bromine concentration in the range of about 1 ppmw to about 10 ppmw as active Br_2.

23. A method according to claim 22 wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is 1,3-dibromo-5,5-dimethylhydantoin.

24. A method according to claim 18 wherein said source of bromide ion is sodium bromide, wherein said dialkylhydantoin is dimethylhydantoin, wherein said at least one N,N'-dihalo-5,5-dialkylhydantoin is at least one 1,3-dibromo-5,5-dialkylhydantoin in which one alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms, and wherein said sodium bromide and said dimethylhydantoin are introduced into said body of water as a pre-mixed, pre-packaged composition containing in the range of about 2 to about 5 parts by weight of dimethylhydantoin per each part by weight of sodium bromide.

25. A method according to claim 24 wherein said at least one 1,3-dibromo-5,5-dialkylhydantoin is 1,3-dibromo-5,5-dimethylhydantoin.

26. A recreational body of water in operable contact with an oxidation-reduction potential sensor to which body of water has been added (A) a source of bromide ion and at least one dialkylhydantoin in which the alkyl groups each contain independently in the range of 1 to about 4 carbon atoms and then to which is added (B) at least one N,N'-dihalo-5,5-dialkylhydantoin in which one halogen atom is a bromine atom and the other halogen atom is either a bromine atom or a chlorine atom, and in which one alkyl group is a methyl group and the other alkyl group contains in the range of 1 to about 4 carbon atoms, said body of water having a stable oxidation-reduction potential whereby said sensor more accurately tracks active bromine concentration of said body of water.

27. A recreational body of water according to claim 26 wherein said body of water is a swimming pool and wherein (B) is at least one 1,3-dibromo-5,5-dialkylhydantoin.

28. A recreational body of water according to claim 27 wherein said at least one 1,3-dibromo-5,5-dialkylhydantoin is 1,3-dibromo-5,5-dimethylhydantoin.

29. A recreational body of water according to claim 28 wherein (A) consists essentially of sodium bromide and dimethylhydantoin.